



2001 Water Quality Report

Lopez Project

The County of San Luis Obispo is pleased to present this annual report describing the quality of your drinking water. We sincerely hope this report gives you the information you seek and have a right to know.

What is the source of my drinking water?

Your water comes from a 67 square mile watershed which drains into Lopez Lake, located ten miles east of the City of Arroyo Grande. Lopez Lake has a total capacity of 51,800 acre-feet which allows the Lopez Water Treatment Plant (WTP) to provide six million gallons per day for users. Water from the lake is piped three miles to a terminal reservoir. The water remains in the terminal reservoir for a period of time to minimize the potential for viral contamination from human contact and to aid particle settling prior to filtration and chlorination at the Lopez WTP. The Lopez WTP provides drinking water for Arroyo Grande, Grover Beach, Pismo Beach, Oceano Community Services District, County Service Area 12, and the Avila Beach Community Services District.

Some of these agencies supplement their Lopez and well water supplies with State Water. The County delivers State Water to these agencies through the Lopez distribution system. The County charges State Water users for a portion of Lopez costs thereby reducing the costs of Lopez Water. State Water comes from northern California near Mount Shasta and from the Sacramento Delta area.

The County samples Lopez Lake, Terminal, WTP, and Distribution on a regular basis and has the water samples analyzed for regulated and unregulated contaminants by a California-certified analytical laboratory. The laboratory results are reviewed and evaluated relative to the California Drinking Water Primary and Secondary Maximum Contaminant Level (MCL) standards. The laboratory results are then submitted to the California Department of Health Services (DHS). In June of 2001, an assessment was completed of Lopez Lake and Terminal Reservoir. The assessment was conducted for the County by Boyle Engineering Corporation with assistance from County staff. The assessment included a review of water system files and previous watershed survey reports prepared in 1996 and 2001. Field surveys were conducted to locate and assess the vulnerability of the surface water sources to possible chemical contamination. The surface water sources at Lopez Lake and Terminal were found to be most vulnerable to the following activities for which no associated contaminants have been detected: livestock near the reservoir and a roadway. A copy of the assessment is available at:

Department of Health Services
1180 Eugenia Place, Suite 200
Carpinteria, CA 93013

or
County of San Luis Obispo, Department of Public Works,
County Government Center, Room 207
San Luis Obispo, CA 93408

You may also request a summary of the assessment be sent to you by contacting Kurt Souza, DHS District Engineer, at 805-566-1326 or John Beaton, Water Quality Manager, at 805-781-5111.

Where can the community participate in decisions regarding water quality?

The San Luis Obispo County Board of Supervisors meets every Tuesday (except the 5th Tuesday in a month) in the board chambers located in the Government Center Annex at 1050 Monterey Street, San Luis Obispo. The Board holds budget hearings during the month of June. Interested persons should check the Board's agendas for specific dates. Agendas for all Board of Supervisors meetings are posted in some County libraries, the County Government Center, and on the Board of Supervisors' internet web site at <http://www.co.slo.ca.us>.

The public can also participate in the Zone 3 Advisory Group meetings. This group is composed of representatives from the Five-Cities area. The group meets at 6:30 pm on the 3rd Thursday of January, March, May, July, September, and November. Information on meeting times and places are published in the newspaper or can be obtained from the County of San Luis Obispo Department of Public Works.



Photo by John Sutherland

2001 Water Statistics

- Lopez Water Production
⇒ 1569 Million-Gallons
- State Water Delivered
⇒ 627 Million-Gallons
- Total Water Delivered
⇒ 2196 Million-Gallons
- Average Daily Demand
⇒ 6 Million-Gallons
- Habitat Releases
⇒ 645 Million-Gallons



The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

Contaminants that may be present in source water include:

- *Microbial contaminants*, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- *Inorganic contaminants*, such as salts and metals, which can be naturally-occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- *Pesticides and herbicides*, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.
- *Organic chemical contaminants*, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems.
- *Radioactive contaminants* which can be naturally-occurring or be the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, the USEPA and the California Department of Health Services (DHS) prescribe regulations which limit the amount of certain contaminants in water provided by public water systems. DHS regulations also establish limits for contaminants in bottled water which must provide the same protection for public health.

Tables 1,2,3,4, and 5 list all of the drinking water contaminants that were detected from January 2001 through December 2001, unless otherwise noted. The presence of these contaminants in water does not necessarily indicate that the water poses a health risk. The DHS requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. Some of the data, though representative of the water quality, may be more than one year old.

Table 1 - Treatment of surface water sources		
Turbidity Performance Standard - Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of our filtration system. Turbidity of filtered water must: 1. Be less than or equal to 0.5 NTU in 95% of measurements in a month. 2. Not exceed 1.0 NTU for more than eight consecutive hours. 3. Not exceed 5 NTU at any time.	Treatment Technique for Lopez Project Conventional Treatment	Treatment Technique for Central Coast Water Authority (State Water) Conventional Treatment
Lowest monthly percentage of samples that met Turbidity Performance Standard 1.	99	100
Highest single turbidity measurement during the year.	0.51	0.13
The number of violations of any surface water treatment requirement.	0	0

Table 2 - Microbiological Contaminants			Lopez WTP		State Water		Potential Source of Contamination
Contaminant (reporting units)	MCL	PHG (MCLG)	Range	Average	Range	Average	
Total Coliform Bacteria	5.0% of monthly samples	(0)	0-1.6%	0.16	0-0.9%	0.08%	Naturally present in the environment

Table 3 - Detection of Contaminants with a Primary Drinking Water Standard			Lopez WTP		State Water		Potential Source of Contamination
Contaminant (reporting units)	MCL	PHG (MCLG)	Range	Average	Range	Average	
Aluminum (ppb)	1000	600	ND-256	99	ND-170	50	Erosion of natural deposits; residue from some surface water treatment processes
Arsenic (ppb)	50	-----		3	ND	ND	Runoff from orchards; natural deposits; glass & electronics production wastes
Fluoride (ppb)	2000	1000		380	ND	ND	Erosion of natural deposits
Gross Alpha Particle Activity (pCi/L)	15	----		1.24 (2000)	0.78-2.98	1.46	Erosion of natural deposits
Nitrate as NO ₃ (ppm)	45	45		ND	6.60	6.60	Runoff & leaching from fertilizer use; sewage; natural erosion
Total Trihalomethanes (ppb)	100	-----	52-108.4	83.5*	45.0-53.0	48.5	By-product of drinking water chlorination

*Some people who use water containing trihalomethanes in excess of the MCL over many years may experience liver, kidney, or central nervous system problems, and may have an increased risk of getting cancer. The County will be upgrading the Lopez Water Treatment Facility to reduce trihalomethane levels in 2004. In the interim, the County will be using either potassium permanganate or chlorine dioxide to reduce the total trihalomethane level in the distribution system.

Table 4 - Detection of Contaminants with a Secondary Drinking Water Standard		Lopez WTP		State Water		Potential Source of Contamination
Contaminant (reporting units)	MCL	Range	Average	Range	Average	
Aluminum (ppb)	200	ND—256**	99	ND-170	50	Erosion of natural deposits; residue from some surface water treatment processes
Chloride (ppm)	500		24	56-148	96	Runoff/leaching from natural deposits; seawater influence
Color (CU)	15		1		5	Naturally occurring organic materials
Corrosivity (LI)	Noncorrosive		0.2		Noncorrosive	Natural or industrially-influenced balance of hydrogen, carbon and oxygen in the water; affected by temperature and other factors
Odor - Threshold (TON)	3		1.2	1-2.7	1.5	Naturally occurring organic materials
Specific Conductance (micromhos/cm)	1600		530		505	Runoff/leaching from natural deposits; seawater influence
Sulfate (ppm)	500		110		79	Runoff/leaching from natural deposits; industrial wastes
Turbidity (NTU)	5		0.10	0.05-0.08	0.06	Soil Runoff
Total Dissolved Solids (ppm)	1000		400		330	Runoff/leaching from natural deposits

Table 5 - Detection of Contaminants without a Drinking Water Standard		Lopez WTP		State Water		Potential Source of Contamination
Contaminant (reporting units)		Range	Average	Range	Average	
Alkalinity as CaCO ₃ (ppm)			220	73-96	80	Runoff/leaching from natural deposits; seawater influence
Calcium (ppm)			69	46-84	59	Runoff/leaching from natural deposits; seawater influence
Total Haloacetic Acids (ppb)		26.3—34.0	30.9	8.4-12.0	9.9	By-product of drinking water chlorination
Hardness (ppm)			300	93-156	118	Generally found in ground and surface water
Magnesium (ppm)			38		14	Runoff/leaching from natural deposits; seawater influence
pH			7.74	8.04-8.38	8.19	Runoff/leaching from natural deposits; seawater influence
Potassium (ppm)			NA		3.2	Runoff/leaching from natural deposits; seawater influence
Sodium (ppm)			20		58	Runoff/leaching from natural deposits; seawater influence
Total Organic Carbon (ppm)		3.99—5.9	4.8	1.82-2.66	2.39	Naturally present in the environment

** Aluminum was found at levels that exceed the secondary MCL of 200 ppb; the aluminum MCL was set to protect you against unpleasant aesthetic effects such as color, taste, and odor. The high aluminum levels are due to residue from the water treatment process. Since violating this MCL does not pose a risk to public health, the State allows the affected community to decide whether or not to treat to remove it.

TERMS USED IN THIS REPORT:

Maximum Contaminant Level Goal (MCLG) and Public Health Goal (PHG) - The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs are set by the Federal Environmental Protection Agency and PHGs are set by the California Environmental Protection Agency.

Maximum Contaminant Level (MCL) - The highest level of a contaminant that is allowed in drinking water. Primary MCLs are set as close to the PHGs (or MCLGs) as is economically and technologically feasible. Secondary MCLs are set to protect the odor, taste, and appearance of drinking water.

Primary Drinking Water Standards (PDWS) - MCLs for contaminants that affect health along with their monitoring and reporting requirements, and water treatment requirements.

Secondary Drinking Water Standards (SDWS) - MCLs for contaminants that affect taste, odor, or appearance of the drinking water. Contaminants with SDWSs do not affect the health at the MCL levels.

Treatment Technique (TT) - A required process intended to reduce the level of a contaminant in drinking water.

Regulatory Action Level (AL) - The concentration of a contaminant which, if exceeded, triggers a treatment or other requirement which a water system must follow.

No Standard (NS) - Contaminant for which there is no established MCL.

Not Detected (ND) - Contaminant is not detectable at testing limit

Not Analyzed (NA) - Contaminant was not analyzed.

pCi/L - picoCuries per liter (a measure of radioactivity)

ppm - parts per million, or milligrams per liter (mg/L)

ppb - parts per billion, or micrograms per liter (µg/L)

CU - color units

NTU - Nephelometric Turbidity Unit

TON - Threshold Odor Number

LI - Langelier Index; Noncorrosive = Any positive value, Corrosive = Any negative value



County of San Luis Obispo
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San Luis Obispo, CA 93408

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WE'RE ON THE WEB!
WWW.SLOCOWATERQUALITYLAB.ORG

Este informe contiene información muy importante sobre su agua de beber. Tradúzcalo ó hable con alguien que lo entienda bien.



Additional General Information on Drinking Water

All drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the USEPA's Safe Drinking Water Hotline, 1-800-426-4791.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. USEPA/Centers for Disease Control guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline, 1-800-426-4791.

Additionally, the EPA Office of Ground Water and Drinking Water maintains a website with useful information on drinking water. The address is www.epa.gov/safewater/. Information can also be obtained by accessing the American Water Works Association's website at <http://www.awwa.org>, the DHS website at www.dhs.ca.gov/ps/ddwem/index.htm, or by calling John Beaton, Water Quality Manager, at 781-5111.

Water Facts

Water consumption for the Lopez Project almost doubles in the summer. Increased landscape watering and a greater population both contribute. The tips below can help conserve existing resources to reduce the need for new, more expensive water.

Tips to save water, energy, and money

- Consider California-native landscaping.
- Front loading washing machines use less water and less energy.
- Wash full loads of dishes and clothes.
- Fix leaks inside and out.
- Turn off the faucet while washing dishes, shaving, brushing teeth, or soaping in the shower.
- Take shorter showers.
- Capture water while waiting for hot water for other uses.
- Inspect and repair irrigation systems.
- Use a bucket and hose nozzle for car washing.

